

REMARKS

Claims 1-10 and 13-15 are currently pending. Support for the amendment to claim 1 may be found in the specification as originally filed, for example, in original claims 4 and 5. Support for new claims 13-15 may be found in the specification as originally filed, for example, in original claims 10-12. Claims 3-6 are amended for clarity and to provide proper antecedent basis for the terms therein.

I. The Art Rejections Based on Allred et al, JP 10-7409 or Komatsu et al

Claims 1-12 are rejected under 35 U.S.C. §102(b) as allegedly being anticipated by or, in the alternative, under 35 U.S.C. §103(a) as allegedly being obvious over Allred et al, or JP 10-7409 or the article by Komatsu et al.

Applicants respectfully submit that the present invention is not anticipated by or obvious over the disclosures of Allred et al, or JP 10-7409 or the article by Komatsu et al and request that the Examiner reconsider and withdraw these rejections in view of the following remarks.

The material of JP10-7409 is made by emitting BN on a substrate from gaseous material using the CVD method. To the contrary, the invention of the present application uses solid state BN as the starting raw material, and produces 5H and 6H type BN by irradiating laser directly (Claim 4) or irradiating laser by introducing plasma of reactive gas which includes nitrogen (Claim 5).

In addition, 5H and 6H type BN produced as such has a new crystalline structure, whereby it is a sp³-bonded boron nitride having a hexagonal 5H or 6H polytypic form and having a property of emitting light in ultraviolet region. It is respectfully submitted that, until the

present invention, a BN having a hexagonal 5H or 6H polytypic form that is capable of emitting light in ultraviolet region has not been obtained.

Allred relates to photo-assisted CVD, which is one that uses an advantageous effect of adding light to a CVD process. However, the present invention uses a method in which light and plasma are used in combination in the CVD process. Such a method is totally different and not obvious from the method in Allred paper.

In Komatsu, a process is such that laser and plasma are used in combination in a CVD method (Chemical Vapor Deposition) where a raw material is gas. On the other hand, in case of claims 1, 4 and 5, a raw material is solid boron nitride (BN), which is totally different from that in Komatsu paper.

For the above reasons, it is respectfully submitted that the subject matter of claims 1-8 and 13-15 is neither taught by nor made obvious from the disclosures of Allred et al, or JP 10-7409 or the article by Komatsu et al and it is requested that the rejections under 35 U.S.C. §102/103 be reconsidered and withdrawn.

II. The Rejections under 35 U.S.C. §112 and 35 U.S.C. §101

Claims 9-12 are rejected under 35 U.S.C. §112, second paragraph, as allegedly being indefinite.

Claims 9-12 are rejected under 35 U.S.C. §101.

Claims 9-12 have been cancelled and replace with new claims 13-15. It is respectfully submitted that claims 13-15 are clear and definite and related to patentable subject matter.

Amendment Under 37 C.F.R. §1.111
Application No. 10/518,644
Attorney Docket No. 043058

III. Conclusion

In view of the above, Applicants respectfully submit that their claimed invention is allowable and ask that the rejections under 35 U.S.C. §102 and §103 and the rejection under 35 U.S.C. §101 and §112 be reconsidered and withdrawn. Applicants respectfully submit that this case is in condition for allowance and allowance is respectfully solicited.

If any points remain at issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the local exchange number listed below.

If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,
WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP



Lee C. Wright
Attorney for Applicants
Registration No. 41,441
Telephone: (202) 822-1100
Facsimile: (202) 822-1111

LCW/af